REMARKS

The examiner has rejected independent claims 1, 9, and 15 under 35 USC 103 as being unpatentable over Marchetto combined with Kaiser, Jalali, and Koizumi, and independent claim 10 is rejected under 35 USC 103 as being unpatentable over Marchetto combined with Myers and Jalali. The examiner is urged to reconsider and withdraw the rejection, particularly in light of the amendment. (Applicant reserves the right to pursue the subject matter of the unamended claims in a continuation application.)

Claims 9 and 15 have been cancelled. Claim 1 has been made dependent on claim 10. Thus, the only remaining independent claim is claim 10.

The lack of relevance of Marchetto, Kaiser, Jalali, and Mayers has been addressed in prior replies, as the examiner has relied on these references in prior rejections. The examiner's response to the patentability arguments in applicant's prior replies is to rely on the disclosure of the new reference, Koizumi. But Koizumi simply teaches the conventional DSL technique described in the background (page 1, lines 23-26):

> In point-to-point, multi-carrier systems such as DSL, the carriers may be configured for different bit rates based on channel characteristics. In a point-to-point applications such as DSL, there is no need to provide channel information with a transmission as each DSL transceiver only communicates with on other DSL transceiver.

The key point is that in Koizumi and other DSL systems the different bit rates for different carriers are <u>not transmitted with the data</u>. Instead the information defining the different bit rates is transmitted <u>only during an initialization period</u>. This works for DSL because any given transceiver only communicates with one other transceiver (typically a remote terminal communicates with a central office terminal). It is very clear that this is how Koizumi works (e.g., "the calculated bitmap being sent to and stored in the transmitting side during an initialization period of the communications", col. 1, lines 63-65; "[a]fter the initialization period, the transmitting side transmits data according to the bitmap optimized in the receiving side", col. 2, lines 17-19; "during a training period prior to communication", col. 5, line 65).

Claim 10 calls for an entirely different communication method. Instead of simply figuring out the different bit rates once for each communication period, and then having the transmitter use the same set of bit rates for all subsequent transmissions, the invention stores a channel map at the transmitter that defines the manner in which carriers are encoded and modulated for different pairs of transceivers. A channel map index specifies which of different sets of carrier encoding and modulating stored in the channel map is to be used for a particular transmission. For example if the index is set to 0, one set of carrier encoding and modulating stored in the channel map is used, but if the index is set to 1, a different set of carrier encoding and modulating is used. The transmitter sends the channel map index in the data frame, and the receiver takes the channel map index and looks up the corresponding set of carrier encoding and modulating stored in the channel map. In this way, the invention permits a transceiver to use a different set of carrier encoding and modulating (e.g., a different set of carrier bit rates) when it transmits to one receiver than when it transmits to another receiver. These differences from the prior art – a channel map with a channel map index, and transmitting the channel map index in the data frame – are spelled out in claim 10:

> 10. In a network of stations, a method of operating a station comprises:
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> transmitting data across a plurality of different connections between any of a plurality of transmitters and any of a plurality of receivers;
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> using a plurality of carriers to transmit data between a transmitter and a receiver;
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> maintaining, for a connection over a channel between a transmitter in the station and a receiver in another station, a channel map provided by the receiver based on characteristics of the channel for the connection and <u>having an associated channel map index</u>;
>
> having the transmitter use the channel map to encode and modulate frame data in a data frame for transmission over the channel to the receiver, wherein the channel map provides for the encoding and modulating for at least some carriers for at least one pair to be different from that used for the same carriers for at least one other pair and
>
> <u>having the transmitter send the associated channel map index in the data frame to identify to the receiver the channel map used by the transmitter for encoding and modulating frame data in the data frame</u>.

Accordingly, claim 10 is in condition for allowance.

The remaining claims are all properly dependent on claim 10, and thus allowable therewith. Each of the dependent claims adds one or more further limitations that enhance patentability, but those limitations are not presently relied upon. For that reason, and not because applicants agree with the examiner, no rebuttal is offered to the examiner's reasons for rejecting the dependent claims.

Allowance of the application is requested.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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